



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/495,141	01/31/2000	Mark J. Hampden-Smith	SMP-023-2-1	4450

7590

11/07/2005

David F. Dockery
MARSH FISCHMANN & BREYFOGLE LLP
3151 S. Vaughn Way, Suite 411
Aurora, CO 80014

EXAMINER

TALBOT, BRIAN K

ART UNIT

PAPER NUMBER

1762

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/495,141

Applicant(s)

HAMPDEN-SMITH ET AL.

Examiner

Brian K. Talbot

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-20 and 24-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-20 and 24-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 1762

1. The response filed 8/22/05 has been considered and entered. Claims 12-20 and 24-38 remain in the application.

2. In light of the response filed 8/22/05, the 35 USC 102 and 103 rejections have been withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12- 20 and 24-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura et al. (6,100,633) in combination with Nanto et al. (5,921,836).

Okumura et al. (6,100,633) teaches a plasma display panel with phosphor microspheres. The device can also be a flat panel display 9col. 1, lines 5-10). The phosphor particles can be of a particle size of 1-5 microns 9col. 1, lines 55-60) and up to a particle size of .1-20 microns (col. 8, lines 15-20). The phosphor particles can comprise metal oxides or sulfide of the phosphor (col. 8, lines 10-15 and col. 4, lines 4-15). The phosphor particles are spherical in shape (col. 7, lines 30-35).

Art Unit: 1762

Okumura et al. (6,100,633) fails to teach applying the phosphor is a pattern by a direct write tool controllable over a x-y axis.

Nanto et al. (5,921,836) teaches an apparatus for forming fluorescent layers of a plasma display panel comprising a nozzle for ejecting the fluorescent layers which is controllable over an x-y axis (abstract and Figs 2-5). The dispenser is an automated syringe or nozzle (col. 4, lines 40-45).

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified Okumura et al. (6,100,633) process by applying the phosphor material with the apparatus of Nanto et al. (5,921,836) with the expectation of achieving more precise control over the deposition pattern desired.

With respect to claims reciting size distribution, density and the particles being hollow, it is the Examiner's position that these factors are "result effective variables" which are optimized through routine experimentation depending upon the desired final product. It has been well settled that the mere Optimizing of well known result effective variable is deemed as an obvious modification of the art absent a showing of unexpected results.


With respect to the claims 20 and 34, which recites an "ink-jet" dispenser, it is the Examiner's position that ink-jet printers are well known in the art of coating and one skilled in the art at the time the invention was made would have had a reasonable expectation of obtaining similar success with the use of a variety of commonplace dispensers including ink-jet and syringes.

Art Unit: 1762

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 10/2/05
Brian K Talbot
Primary Examiner
Art Unit 1762

BKT